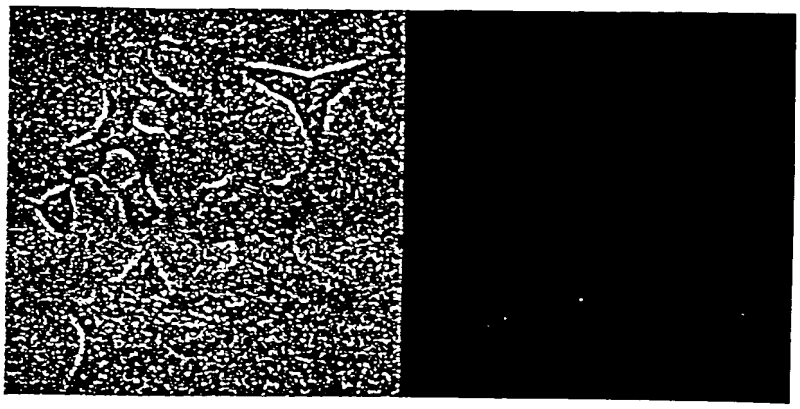


Figure 1

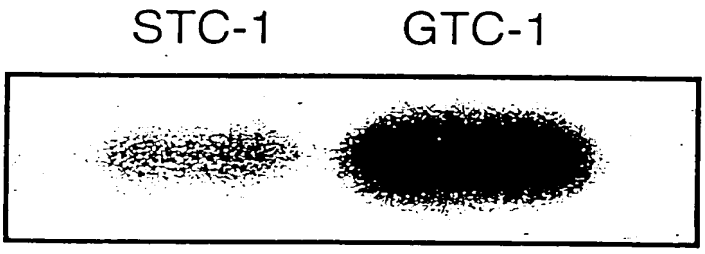


Figure 2

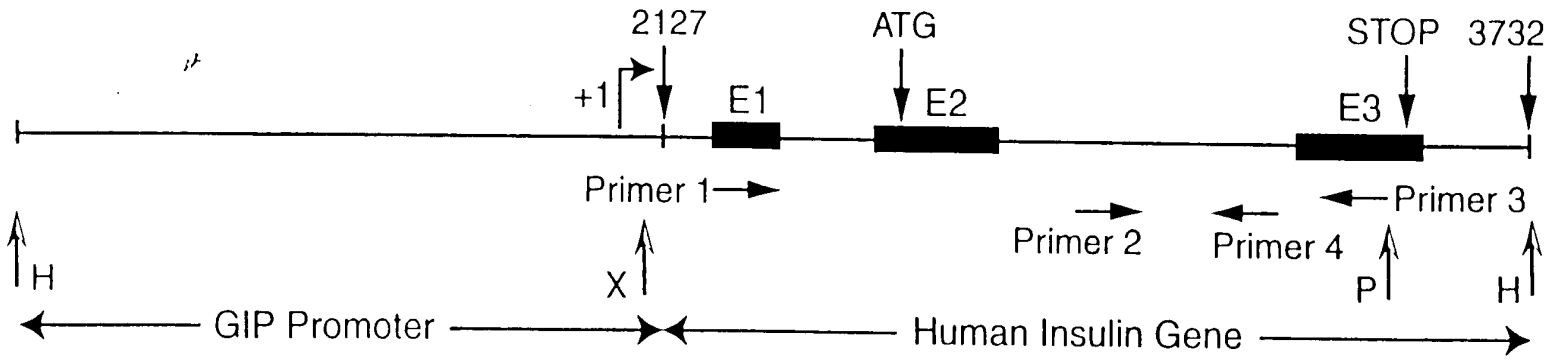
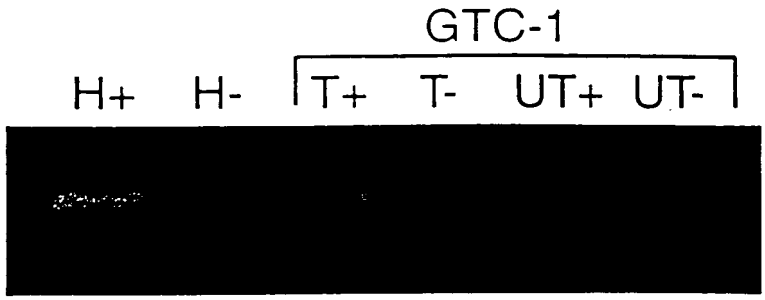

2127
ATG
STOP
3732
+1
E1
E2
E3
Primer 1
Primer 3
Primer 2
Primer 4
H
X
P
H
GIP Promoter
Human Insulin Gene

Figure 3



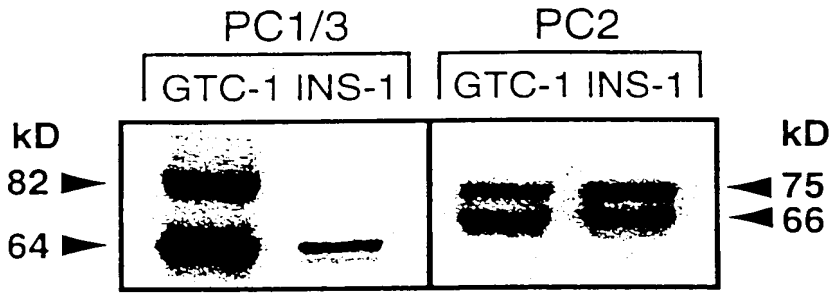


Figure 4

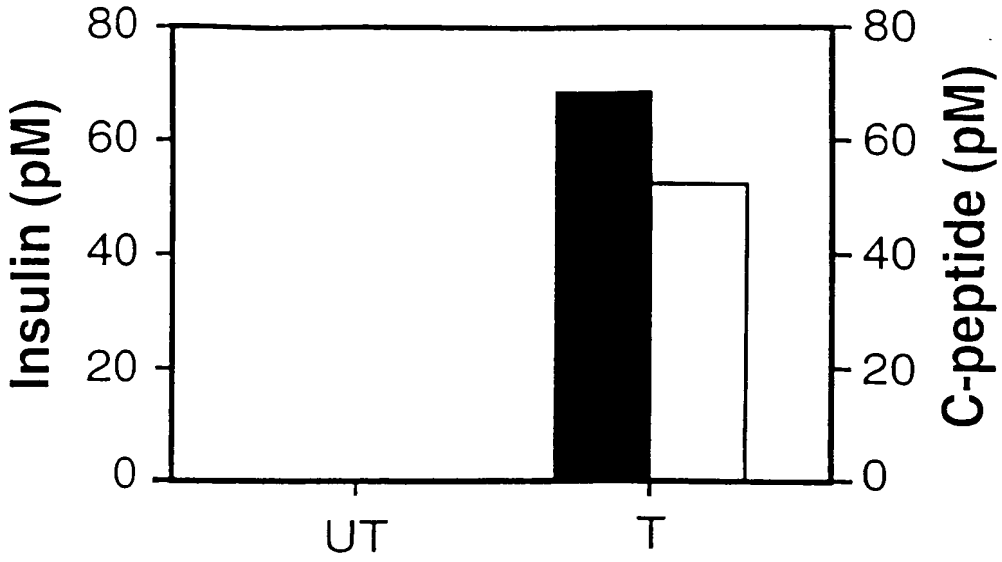


Figure 5

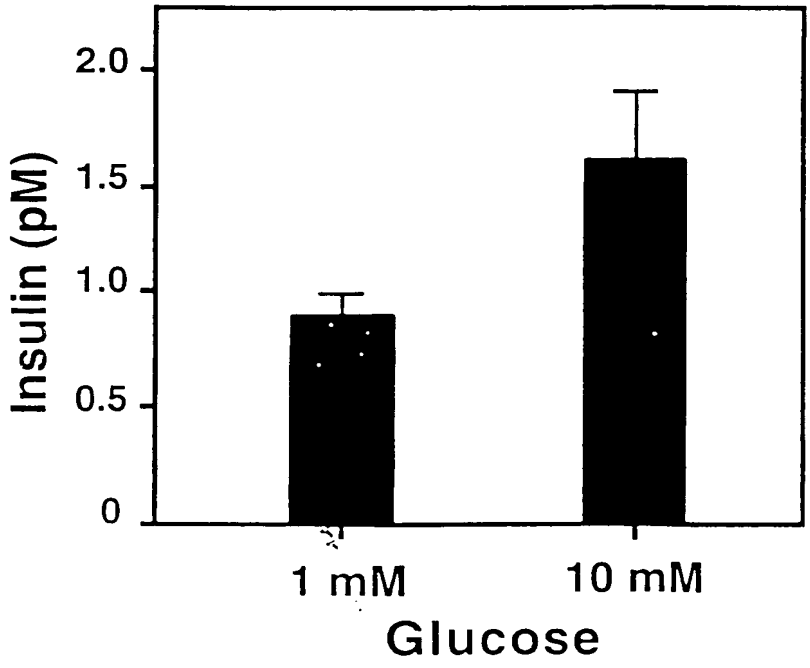


Figure 6

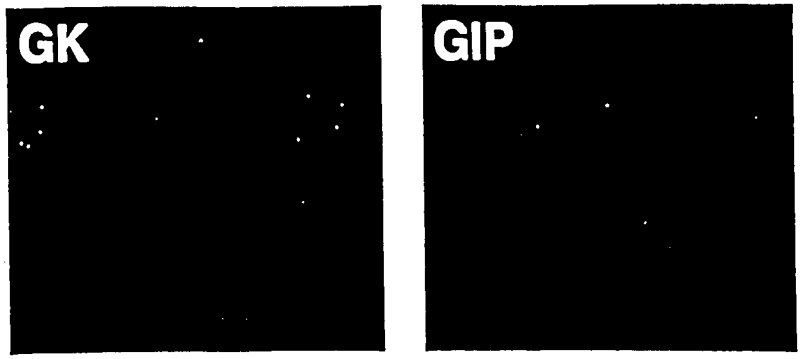


Figure 7

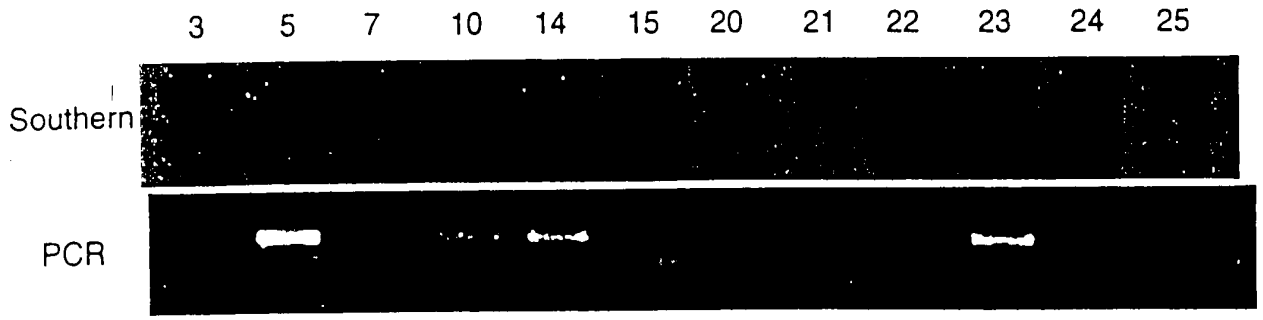


Figure 8

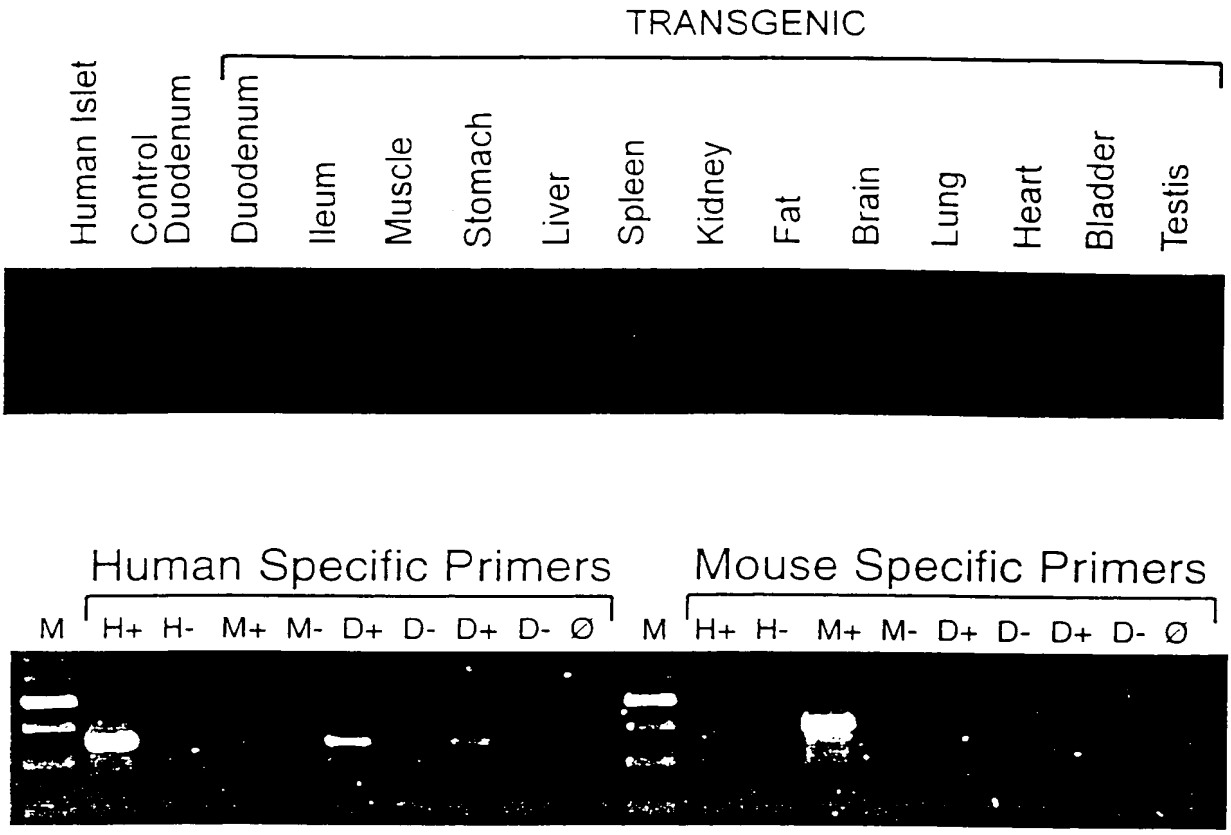

TRANSGENIC
Human Islet
Control Duodenum
Duodenum
Ileum
Muscle
Stomach
Liver
Spleen
Kidney
Fat
Brain
Lung
Heart
Bladder
Testis
Human Specific Primers
Mouse Specific Primers
M H+ H- M+ M- D+ D- D+ D- Ø
M H+ H- M+ M- D+ D- D+ D- Ø

Figure 9

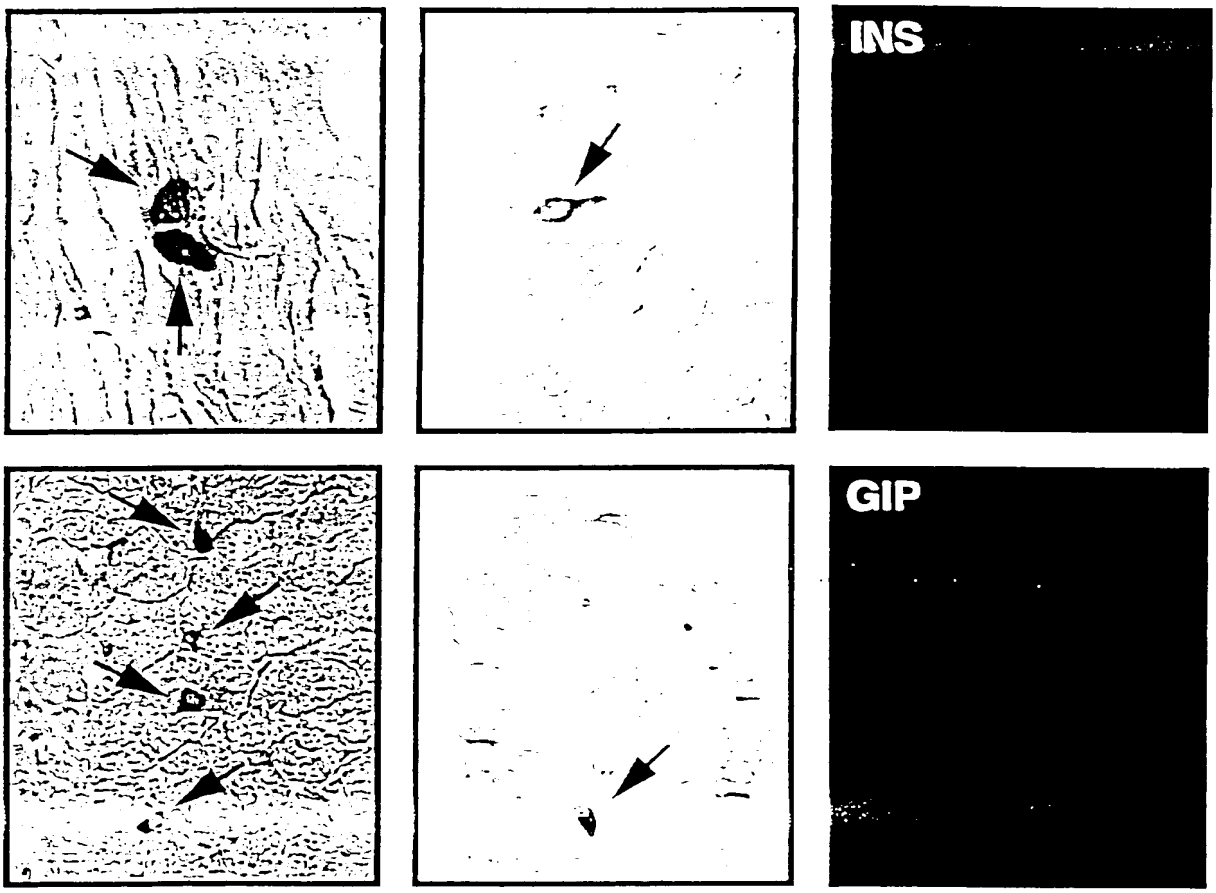


Figure 10

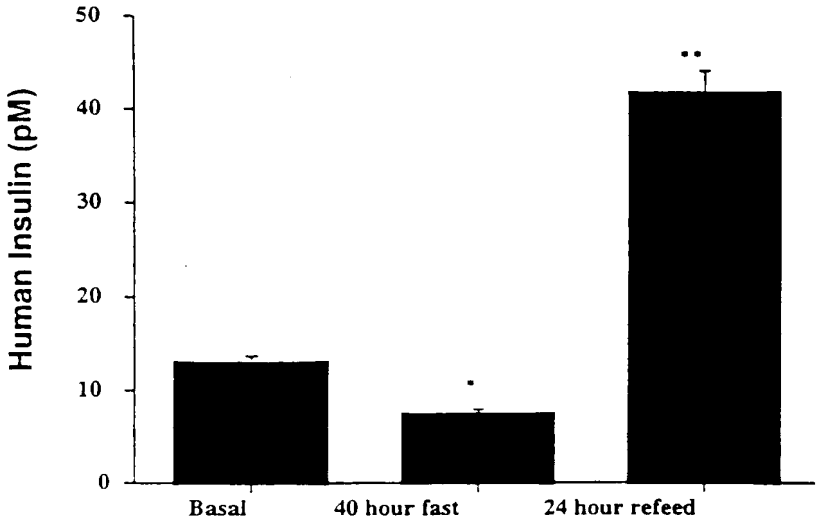


Figure 11A

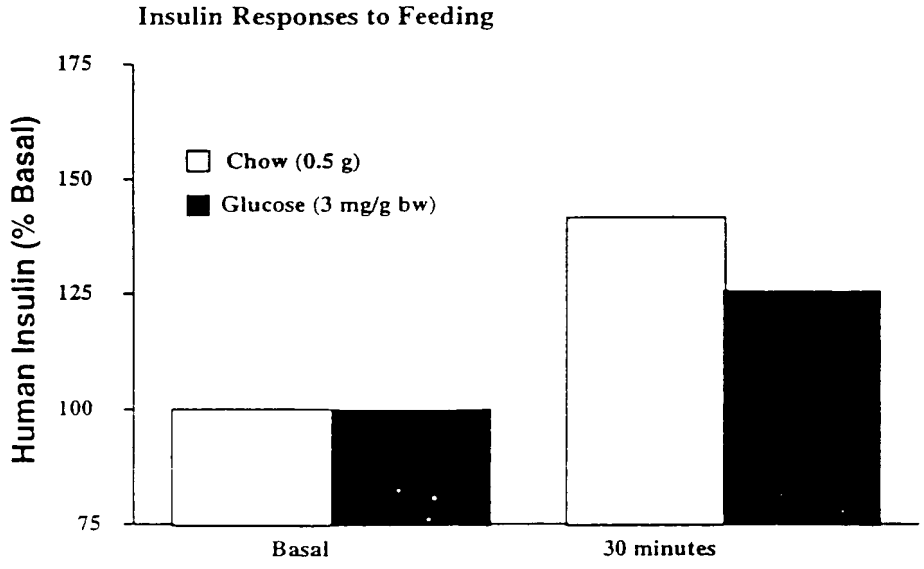


Figure 11B

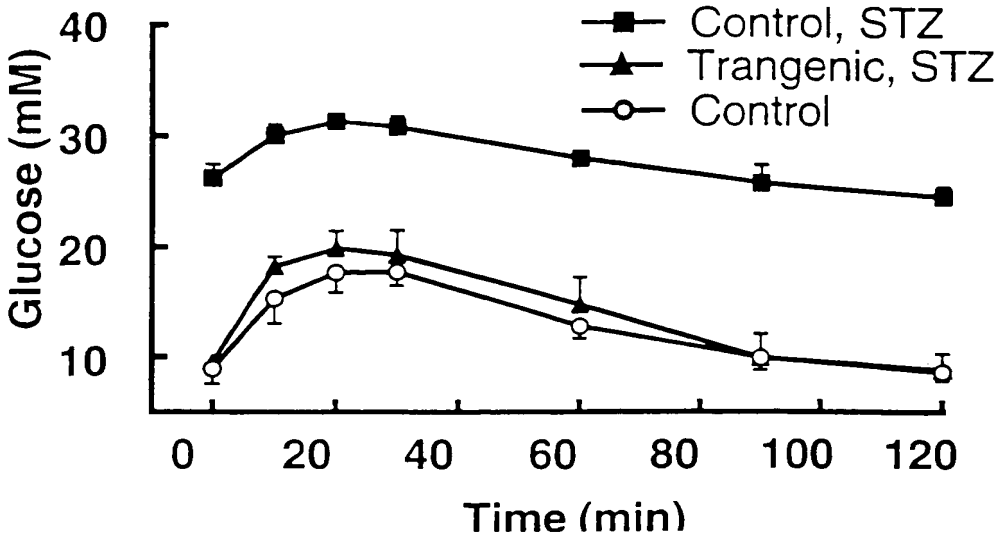


Figure 12

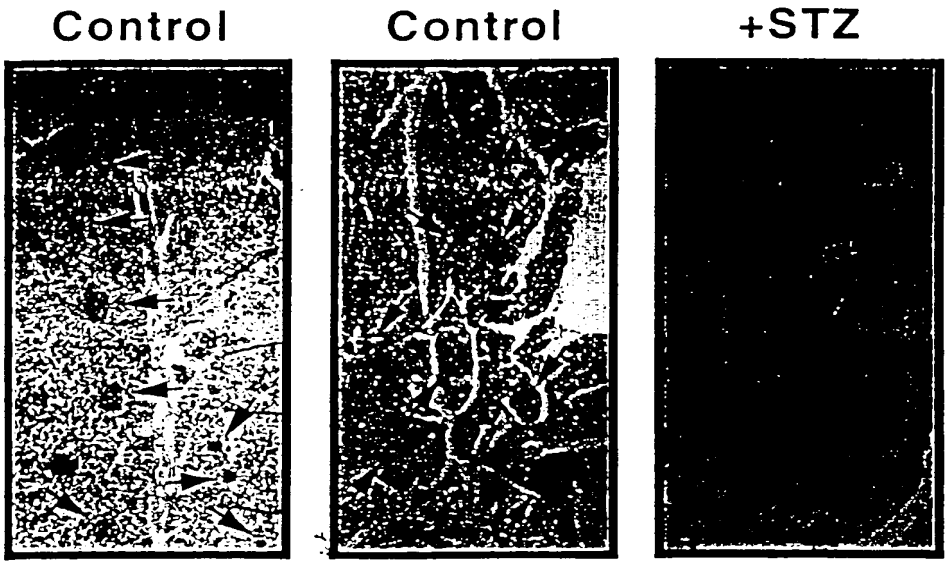


Figure 13

GIP Promoter

atctctccag tcccttcctc aaccttctga gaacaggcaa actccaccat gattggctta
taaatcgtta tatggaccta ctaaggatgt aacaactggg agcatgctta cctagcatgt
ccgaaacccg gagttcagtc cctagcactg cacaatctca gtccttatga agtagaggga
agatcagagg ttcaaggaca acatcaattt gagaccagcc tgggctactt accaaagaaa
gaaagagaga aataaataaa tagatagata aataaataaa taagtaaata aatatcttat
ggctggagag ttggttcagt gtttaagagc acttattgtg gggttgggga tttagctcag
tggtagagcg tttgcctagg aagctcaagg ccctgggttc ggtccccagc tccggaaaca
aaacaaaaca aaacaaaaac aaacaaacaa acaaaaaacc ctgtctggaa aacacctaaa
taaagatata tatatataat atatatacat ataatatata tatgatatat atatatatat atatctttgt
ggaggaagct ataccttttct ttcttgagcc tccaacacat aaatgtgccc tgtcatccca
ttcatattgc cccaagtggg aaaccatgtg actataaact ctaagttcct agtcactagg
aactctcaag acacctacct caggcagcat cacttccgga gtgccaccat tatcagttaa
catccacatc tgggattcag atcccagatc ccttctgttc cctcagaagt cacctacagc
tttgtggggg tgccccttcc ctcagagagt gccacccgag ttgaccctca ccaaggcaac
cctttgtacc cacagaatcc aacaggaagt agggggaaga acagccggcc ctgtgcccag
aaaaaaagag gggagggaga agggggtgct cagcctacca ccgggcaggt cccagataac
actgcagata cccaaatgtt aatcacccat tagcacaggc ccagagcaaa ggggaaagtg
attaggtgta taatggggtt cactgggcag gaccagtggg cttgagcttc aaagataaga
ggttttcagg ttaatcagca ccctgtggtg tgtggatata aggaagctaa cacagggtct
tgaagcaaga tcctgag

Mouse chromogranin A (Chga) gene, promoter region.
ACCESSION L31361

```
   1 ccgaaattac ccactacgtt ggaattctat aagggttggg tttgctgttt tgtttacagc
  61 tgcgtctttg gcacccagca cagctgagtg gttctaagcc cacgtcgatg cttaacacat
 121 ggttgttgaa tgaatacacg cgaagccggt tctcatttag gggcatgagt aggcagaggt
 181 gtgggcagga agcaggaaag agcggaaaca ggtgcggaca gaaaggaggg gctctgaagg
 241 atgccagtca gtgccaaact gtcatccaga taccaggttc actgtggccc taggccaggc
 301 tgcacggggc ttcccatgtg gtctgcccag ggtgagagca gaactgcggt gggcggggca
 361 gaaggaaacc aaccaggaag cagggttgca cccaaattat ccaggtttta agtacattta
 421 agagacaagg ctgggctgtt gaaggtcaga ggtgtccctg gggtgctgga ctaggactga
 481 ccacttctgt tttagtttaa tggtgagaac tgcctcacac tgctacctgc cttacttgcc
 541 ccttgagagc tgtgagccta ggacccaccc atgtgtgggt tggaccttca gtcacacact
 601 gaacgtgtgt gaagccactg gttgtcagag cagggctctc ggcactgagg aagcagtgac
 661 cactatcccc tatcaaataa caattaaata cacacagaat gcgaggcaca caactgagtt
 721 tcaggagagg cctcgctcag gcaaggggtt caagaggctt ctgtgggacc cgctggatgt
 781 tccagggagt tcttaaagat gggcgtgcct ccagccaagt gaaatcaaga gaaaagtacg
 841 cgaagtatag gaaaactcag cagtctggag aggtaaatag gggaggaatc cgaggctcag
 901 agacaggagt gacttgccca cggacgcaca gcaagttggc aggtggagtt cagctgtgcc
 961 accttctgaa gccgggtacc ctttacagcc accagataca agcgggatag agacagctga
1021 tggagaagct ggaggtgggg ggcgggaccc cgaaggtggg gaaagggcgc gggggggcgg
1081 tcctatgacg taatttcctg ggtgtgtgcg cgcgtgtgcg tgcgtgtgcg tgtatataaa
1141 agccggcata gcattgctgc tgctgccgcc gccaccgcca ccatcaccgc tgttaccacc
1201 accgctactg cagtgttccc gctggtgcag agctttggta gccagactac agacccactc
1261 ccgccatcct cctgcagcag ctcgtccact ctttccgcac cgtccggctc gctatgcgc
//
```

Figure 14

Mus musculus secretogranin II (Scg2) gene, promoter and exon 1, complete sequence.
ACCESSION AF037451

```
   1 gggaactttc tctagctctt tcattagggg ccctgtgttc catctaatag ctgactgtga
  61 gcatccactt ctgtgcttgc caggcactgg catagcctca caagagacag ctatatcagg
 121 gtcttgtcag caaaatcttt ctggcatatg caatagtgtc tgggtttggt ggttgtatat
 181 gggctggatc cccgggtggg gcagtctctg gatggtcttt ccttccgtct tagctccaaa
 241 ctttgtctct gtaactcctt ccatgggtac tttgtttccc attctaagaa ggagcaaagt
 301 atccacactt ccttcttctt ccttcttctt gagttttgca aatgccacaa aactttcaaa
 361 gccttctgaa tagccttctc tttagtgctt tccaatgtat attaaaataa tctatctttc
 421 atccccattg attaaagcct tcttaaagcc agaaaactat attcattttt ttcttttccc
 481 agtagttcac aaactatctg gcacctcata agcatcataa ctcagttggt gggtagataa
 541 aattggaatg tgattgttca gtcagcagag acttttagag gacctcatac aacaagattc
 601 tctcagttct cagaaatata tttcagtata tacagggtta gaggactcac atctttaata
 661 aaataaagtt aaaaatttag acctgtataa attattaagg tacctaatca agttccacgg
 721 caaagtacag ccatggttat gaattataaa tccaagaagc ggtgggttaa ctctgacatt
 781 gttccttgga tggttctcat tcattgaagt tagtcacctc aacttactca accaaaacct
 841 agaagtattt ctgtggtact atgttctctt gatgccaaga gggctctagg catatgaaaa
 901 tctctcaatc tctctccctc tctctccccc ttccaccccc actctctctc ttctagcagt
 961 aatccctccc ttcctggtag gcagtatgtt ttttggagca cagtttctta gctatctctt
1021 gcaacacctg attttgctga agatttgaat ggcctcatat agaagtatca acaacttgag
1081 cgtctgtgaa ctctcatttt gacactgtgc tgaaagaatt ggagttgatt ctcattaaaa
1141 aaaaaattaa gcatctcacc ttttttgctc aaactaaaca gttttaaaac agttctgcct
1201 ggagtcatga tatgaaatac gatctatcat atttgcaatg ttctgttcaa ttgtggctgc
1261 accaggaaat gagaagctat ttctttatag gcacaaataa aaagatagtc attatctgta
1321 aaattcttat gacatggcag caagcccaag aaacctttct aaacaaggcg tgaaaacgca
1381 gagatgtcct tgcaattagt catgtctatc tgacagattt cttcctttct aagggaattt
1441 gtgctgaaca ttttatttcg agcctcagag ataaaagaag ggggaagaag ctgtagtttt
1501 tgctacataa gacaggtggc gtaagcatgc aacgctttaa aaaaatatct aaagtgattg
1561 ttttctctcg gattctttga aaaagctcgc ctgcgctggg gtttgaggct gagccggtga
1621 cgtcagcgtg gaatgcggag tcaggcgccc aggctctcta taagccgagg agctgtccgg
1681 tgctgaaacg gcccgagccc tcactcagcg gcagagagga gcatgcttgg agccttccac
1741 ataatataag acagaggtaa
//
```

Mus musculus glucokinase gene, 5' flanking region.
ACCESSION U93275

```
   1 agctttaggt gtgtgaatat ctactttggt gctagggcct tggtcatact aagtaagttt
  61 ccccttcact ggggtgtacc agtttaccct ggactgtcta agcaacaaga aggatagaca
 121 tggcctacca cagatttcat gtctgccact ggctatgtca gaacatgtag gagcttttgg
 181 aatcagtgaa acaggtattt tcagactgcc ttccctgcgt ggggctttcc cgaagccata
 241 ttttcctag agtcagcctt tcccagctga ggacaagctg tactggacag atgccagcca
 301 cttgaactgg gaatacatgg tcatttaggc agctggctta tctcatccat ggtacttgat
 361 ggcttcgggt cagcacctca cagaaagttc agacgggagg cttccgagaa aacagagaag
 421 caggcaggag atcctgcagg caatcctcct gctccacagc ctgcatggac ttccctcagc
 481 cttagtgcgt gtgggtccca tctgagaaca ttggttatat gttattttca aaccgatctg
 541 cctttaagga gtggaagaaa aaaactgtgg tgtttgggct acctttatga taatggcctt
 601 ttcatcctcc taataaatat tgccaagtag ggtagattct atacgaaagc tcttaaccca
 661 tggtattagc aaatcatgta ggtgctaata atgaatactg gatgcagtca gtacagggat
```

Figure 15

721 ataaaatgga atgtaagagc ctgttgctat gaatggttag ctaactagat gttgtacaag
781 aaatgttgac gttatgacgt gtggaaactt ggtattgaag atgtggactc gaaactttgt
841 ggatttttg atgccatgat aaaaatgtga agaatactgt tccttaccaa aaagaagaag
901 aagaaggaga aggaggagga agaggaggag gaggaagaag agggggagga agaagaagag
961 aaggaggagg aagaggagga ggaggaagaa gaggaggagg aggaagaaga agagaaggag
1021 gaggactagg aggaggagga gaagaaggag aaggggaagg agagagtagc cagaacattt
1081 ggggtgccat cagaatacca gatactccag acatagtcac agaaggactg gtttgtttgt
1141 taaataggtg ctttgaaaag tttgtgggga aacctgcagt gagattgtgt gtcttagaaa
1201 tgataggcaa gattcatcca caagaatgcg acaagatggc tgcctgaaca agccctgaac
1261 attaacagca ccagtagacc tgcttacacg gaagaaagca atctcatagg ccctcacccc
1321 aaacaaagac tacagacagc agaggaactg gagagcagga gaaattgggt ctccctttta
1381 tgagcccccc aactggttgt caaatactca atggtcagcc ctgaaatcat atgcacaaag
1441 taatactagc gcaactgaac agattgtagc tgtgtgtgtg tgtgtaatga taacaaagaa
1501 gaaaaggccc catgttagag agggagcaag gtgggcatgg aggtatggaa ggagttggaa
1561 ggaggggtga gaaggggaaa gtgatgtaat tatcttttaa tttataaaaa aataaaaaat
1621 gggctggtga gatggctcag tgggtaagag cacccgactg cttcttccga aggtctggag
1681 ttcaaatccc agcaaccaca tggtggctca caaccatccg taacgagatc tggcgccctc
1741 ttctggagtg tctgaagaca gctacagtgt acttacatat aataaataaa taaatctttt
1801 aaaaaaaata aaaaataaaa tattagaata aaatgtagag gaatattttt aatttaacaa
1861 cttgggtgtg gcaaaagctt tcttcaacaa aaacttaatc cctcagataa gaaaagacta
1921 gaatccacga cgtggataga tacttctgta tgatgcaaga cactatttat caggttgtaa
1981 cttgagcaga acttgagttg taacttgttg ggaaacacaa cacccttggc aaacaaaaga
2041 ttactagata ttttagatga aatataaaaa tactttccac aactgatagg taggaaacag
2101 ttcaatagta atataattat tgaacaaata atccttaaaa gaagaaatcc agaggaatag
2161 caagttaggg gaagagaggg tgtgtgtgtg tgtgtgtgcg cgcacattta tagccaaaat
2221 agatgatata cttaaatgaa catgccatta aaacccatta ttttgcatac agtttacata
2281 tgctaatgaa tacttaaaaa aaaaacattg ggattggaga gaaatggctc agtggttaag
2341 agttcaattc ccagcaacca catgattgct cacaaccatc tgtaatggga tctgatgcct
2401 tcttctggta tgtctgaaga aagtgaccgt gtacttataa ttataaataa ataaatcttt
2461 aaccaaaaaa cccccataat ttcaacaaca gatatgtcct ggtctgaggc ttccaggcat
2521 agaaatagaa acacacagag tgtggagcca gtgcggttca ggtccgccat tccagttcag
2581 gcttcagacc aagagaaagg gaaaagaaga gacaagcaac aag

H.sapiens adenosine deaminase (ADA) gene 5' flanking region and exon 1 (and joined CDS).
ACCESSION X02189

1 tccaggaaat gcgcgatcca ggccggcggg cggggcgggg gctccggcga gagggcgggc
61 cccgggaacg gcggcgggcg gggcgggagg cggggcccgg cccgttaaga agagcgtggc
121 cggccgcggc caccgctggc cccagggaaa gccgagcggc caccgagccg gcagagaccc
181 accgagcggc ggcggaggga gcgacgccgg ggcgcacgag ggcacc

Homo sapiens mRNA for pre-proinsulin.
ACCESSION X70508

MALWMRLLPLLALLALWGPDPAAAFVNQHLCGSHLVEALYLVCGERGFFYTPKTRREA
EDLQVGQVELGGGPGAGSLQPLALEGSLQKRGIVEQCCTSICSLYQLENYCN"

1 gctgcatcag aagaggccat caagcacatc actgtccttc tgccatggcc ctgtggatgc

Figure 16

61 gcctcctgcc cctgctggcg ctgctggccc tctggggacc tgacccagcc gcagcctttg
121 tgaaccaaca cctgtgcggc tcacacctgg tggaagctct ctacctagtg tgcggggaac
181 gaggcttctt ctacacaccc aagacccgcc gggaggcaga ggacctgcag gtggggcagg
241 tggagctggg cgggggccct ggtgcaggca gcctgcagcc cttggccctg gaggggtccc
301 tgcagaagcg tggcattgtg gaacaatgct gtaccagcat ctgctccctc taccagctgg
361 agaactactg caactagacg cagcccgcag gcagcccccc acccgccgcc tcctgcaccg
421 agagagatgg aataaagccc ttgaaccagc

Homo sapiens leptin (LEP), mRNA.
ACCESSION XM_004625

"MHWGTLCGFLWLWPYLFYVQAVPIQKVQDDTKTLIKTIVTRINDISHTQSVSSKQKVTG
LDFIPGLHPILTLSKMDQTLAVYQQILTSMPSRNVIQISNDLENLRDLLHVLAFSKSCHLP
WASGLETLDSLGGVLEASGYSTEVVALSRLQGSLQDMLWQLDLSPGC"

1 tctgttttca ggcccaagaa gcccatcctg ggaaggaaaa tgcattgggg aaccctgtgc
61 ggattcttgt ggctttggcc ctatctttic tatgtccaag ctgtgcccat ccaaaaagtc
121 caagatgaca ccaaaaccct catcaagaca attgtcacca ggatcaatga catttcacac
181 acgcagtcag tctcctccaa acagaaagtc accggtttgg acttcattcc tgggctccac
241 cccatcctga ccttatccaa gatggaccag acactggcag tctaccaaca gatcctcacc
301 agtatgcctt ccagaaacgt gatccaaata tccaacgacc tggagaacct ccgggatctt
361 cttcacgtgc tggccttctc taagagctgc cacttgccct gggccagtgg cctggagacc
421 ttggacagcc tgggggggtgt cctggaagct tcaggctact ccacagaggt ggtggccctg
481 agcaggctgc aggggtctct gcaggacatg ctgtggcagc tggacctcag ccctgggtgc
541 tgaggccttg aaggtcactc ttcctgcaag gactacgtta agggaaggaa ctctggcttc
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661 ttccctgact cctctaagcc actcttccaa aggcataaga ccctaagcct ccttttgctt
721 gaaaccaaag atatatacac aggatcctat tctcaccagg aagggggtcc acccagcaaa
781 gagtgggctg catctgggat tcccaccaag gtcttcagcc atcaacaaga gttgtcttgt
841 cccctcttga cccatctccc cctcactgaa tgcctcaatg tgaccagggg tgatttcaga
901 gagggcagag gggtaggcag agcctttgga tgaccagaac aaggttccct ctgagaattc
961 caaggagttc catgaagacc acatccacac acgcaggaac tcccagcaac acaagctgga
1021 agcacatgtt tatttattct gcattttatt ctggatggat ttgaagcaaa gcaccagctt
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1261 tgtgactgat gttacatcac agtgtttgca atggtgttgc cctgagtgga tctccaagga
1321 ccaggttatt ttaaaaagat ttgttttgtc aagtgtcata tgtaggtgtc tgcacccagg
1381 ggtggggaat gtttgggcag aagggagaag gatctagaat gtgttttctg aataacattt
1441 gtgtggtggg ttctttggaa ggagtgagat cattttctta tcttctgcaa ttgcttagga
1501 tgtttttcat gaaaatagct ctttcagggg ggttgtgagg cctggccagg caccccctgg
1561 agagaagttt ctggccctgg ctgaccccaa agagcctgga gaagctgatg ctttgcttca
1621 aatccatcca gaataaaacg caaaggggctg aaagccattt gttggggcag tggtaagctc
1681 tggctttctc cgactgctag ggagtggtct ttcctatcat ggagtgacgg tcccacactg
1741 gtgactgcga tcttcagagc aggggtcctt ggtgtgaccc tctgaatggt ccagggttga
1801 tcacactctg ggtttattac atggcagtgt tcctatttgg ggcttgcatg ccaaattgta
1861 gttcttgtct gattggctca cccaagcaag gccaaaatta ccaaaaatct tgggggttt
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1981 taggcgagtg ccaggactcc ccaggccagg ccaccaggat ggcccttccc actggaggtc
2041 acattcagga agatgaaaga ggaggtttgg ggtctgccac catcctgctg ctgtgttttt

Figure 17

2101 gctatcacac agtgggtggt ggatctgtcc aaggaaactt gaatcaaagc agttaacttt
2161 aagactgagc acctgcttca tgctcagccc tgactggtgc tataggctgg agaagctcac
2221 ccaataaaca ttaagattga ggcctgccct cagggatctt gcattcccag tggtcaaacc
2281 gcactcaccc atgtgccaag gtggggtatt taccacagca gctgaacagc caaatgcatg
2341 gtgcagttga cagcaggtgg gaaatggtat gagctgaggg gggccgtgcc caggggccca
2401 cagggaaccc tgcttgcact ttgtaacatg tttacttttc agggcatctt agcttctatt
2461 atagccacat ccctttgaaa caagataact gagaatttaa aaataagaaa atacataaga
2521 ccataacagc caacaggtgg caggaccagg actatagccc aggtcctctg atacccagag
2581 cattacgtga gccaggtaat gagggactgg aaccagggag accgagcgct ttctggaaaa
2641 gaggagtttc gaggtagagt ttgaaggagg tgagggatgt gaattgcctg cagagagaag
2701 cctgttttgt tggaaggttt ggtgtgtgga gatgcagagg taaaagtgtg agcagtgagt
2761 tacagcgaga ggcagagaaa gaagagacag gagggcaagg gccatgctga agggaccttg
2821 aagggtaaag aagtttgata ttaaaggagt taagagtagc aagttctaga gaagaggctg
2881 gtgctgtggc cagggtgaga gctgctctgg aaaatgtgac ccagatcctc acaaccacct
2941 aatcaggctg aggtgtctta agccttttgc tcacaaaacc tggcacaatg gctaattccc
3001 agagtgtgaa acttcctaag tataaatggt tgtctgtttt tgtaacttaa aaaaaaaaaa
3061 aaaagtttgg ccgggtgcgg tggctcacgc ctgtaatccc agcactttgg gaggccaagg
3121 tgggggggatc acaaggtcac tagatggcga gcatcctggc caacatggtg aaaccccgtc
3181 tctactaaaa acacaaaagt tagctgagcg tggtggcggg cgcctgtagt cccagccact
3241 cgggaggctg agacaggaga atcgcttaaa cctgggaggc ggagagtaca gtgagccaag
3301 atcgcgccac tgcactccgg cctgatgaca gagcgagatt ccgtcttaaa aaaaaaaaaa
3361 aaaaagtttg ttttaaaaa aatctaaata aaataacttt gccccctg

Homo sapiens cholecystokinin (CCK), mRNA.
ACCESSION XM_003225

"GSAAGLLRLETPSQLRPNPKAMNSGVCLCVLMAVLAAGALTQPVPPADPAGSGLQRAE
EAPRRQLRVSQRTDGESRAHLGALLARYIQQARKAPSGRMSIVKNLQNLDPSHRISDRD
YMGWMDFGRRSAEEYEYPS"

1 ggctcagctg ccgggctgct ccggttggaa acgccaagcc agctgcgtcc taatccaaaa
61 gccatgaaca gcggcgtgtg cctgtgcgtg ctgatggcgg tactggcggc tggcgccctg
121 acgcagccgg tgcctcccgc agatcccgcg ggctccgggc tgcagcgggc agaggaggcg
181 ccccgtaggc agctgagggt atcgcagaga acggatggcg agtcccgagc gcacctgggc
241 gccctgctgg caagatacat ccagcaggcc cggaaagctc cttctggacg aatgtccatc
301 gttaagaacc tgcagaacct ggaccccagc cacaggataa gtgaccggga ctacatgggc
361 tggatggatt ttggccgtcg cagtgccgag gagtatgagt acccctccta gaggacccag
421 ccgccatcag cccaacggga agcaacctcc caacccagag gaggcagaat aagaaaacaa
481 tcacactcat aactcattgt ctgtggagtt tgacattgta tgtatctatt tattaagttc
541 tcaatgtgaa aaatgtgtct gtaagattgt ccagtgcaac cacacacctc accagaattg
601 tgcaaatgga agacaaaatg ttttcttcat ctgtgactcc tggtctgaaa atgttgttat
661 gctattaaag tgatttcatt ctgcc

CCK Promoter (Rat)
ACCESSION S70690

1 aattcgcgcg ctaagccgca ttattcacgt ttccagacat gtcacaaata cagctaattc

Figure 18

```
  61 ctacaacctg agctgtgtca tgggggggggg gggaatcacc cacagcattt aatctgctgc
 121 tgttttaaac acgttgcttc taagtaaaga gaccgctaga gccacaacca ggaacctaac
 181 tgctgctggc atcacttgcc ttttcatagt ctccctcagc cggaaccccc ccacgctggg
 241 tgccttctct atttagaaag agtttctaag cctttctcct tcaccctaga ctggcaaggt
 301 tgagggtagg ctgagggttg caagactgtg agaaaaggga gccccctctct tcttcttgct
 361 cggtgagtat ctcagccaag atcctcacca cccagtggaa tcccgtaact ctagaggaaa
 421 ggaagaactc tagaggacgg gaagatcatt gcaagctccc ctagatgtgc gagcccagcc
 481 cgctccactc agccagccag agcttgaggg tgcttgagac actctctggc gccacttcgc
 541 gaccaaaatc atcggtagat gtaggctggt gagaagtcat cttgggaaga aatggaaacc
 601 ttttccccaa aggctttccg cacaaaaggc aagagctgca cccaggatct taaaattctg
 661 taagacgaga atccacgagg ccaactgtga ttgagttctg aaaaattgag agccctactc
 721 ccctctctca cttgtgggag cccactcagg tctgaagtgc tcccagagaa catgccagaa
 781 ttacatttgc tgacacctag tctgtgaggg tccccccggtt tcctggaagg atttgatccc
 841 tcaaagctca ctaaacagtg gtcagcttct ccattccaga caaactcctg cttctctccg
 901 ggagtagggg tggcaccctc cctgaagagg actcagcaga ggcaccgaac agggtgggga
 961 ggaaagctgt ttagataaag aggaggactc atacaaagta cccgcctgg gaggggctat
1021 cctcattcac tgggccgttt cccttctccc ggggggccac ttcgatcggt ggtctctcca
1081 gtggctgcct ctgagcacgt gtcctgccgg actgcgtcag cactgggtaa acagatgact
1141 ggctgcgtac cgggcggggc tatttaagag gagtcgccct gccgcctgcc ctcaacttag
1201 ctggacagca gccgttggaa accgccaagc cagctgactc cgcatccgaa ggtaagtggc
1261 tggcagatcc aagaatcatg agtgtgaaga actggcctgt agctttgcat ctattgccgt
1321 ttagtctttc cattttctgt gccttcccctc acttgacagc tg
```

Human messenger RNA for growth hormone (presomatotropin).
ACCESSION V00519

"MATGSRTSLLLAFGLLCLPWLQEGSAFPTIPLSRPFDNAMLRAHRLHQLAFDTYQEFEE
AYIPKEQKYSFLQNPQTSLCFSESIPTPSNREETQQKSNLELLRISLLLIQSWLEPVQFLRSV
FANSLVYGASDSNVYDLLKDLEEGIQTLMGRLEDGSPRTGQIFKQTYSKFDTNSHNDDA
LLKNYGLLYCFRKDMDKVETFLRIVQCRSVEGSCGF"

```
   1 cgaaccactc agggtcctgt ggacagctca cctagctgca atggctacag gctcccggac
  61 gtccctgctc ctggcttttg gcctgctctg cctgccctgg cttcaagagg gcagtgcctt
 121 cccaaccatt cccttatcca ggccttttga caacgctatg ctccgcgccc atcgtctgca
 181 ccagctggcc tttgacacct accaggagtt tgaagaagcc tatatcccaa aggaacagaa
 241 gtattcattc ctgcagaacc cccagacctc cctctgtttc tcagagtcta ttccgacacc
 301 ctccaacagg gaggaaacac aacagaaatc caacctagag ctgctccgca tctccctgct
 361 gctcatccag tcgtggctgg agcccgtgca gttcctcagg agtgtcttcg ccaacagcct
 421 ggtgtacggc gcctctgaca gcaacgtcta tgacctccta aaggacctag aggaaggcat
 481 ccaaacgctg atggggaggc tggaagatgg cagccccccgg actgggcaga tcttcaagca
 541 gacctacagc aagttcgaca caaactcaca caacgatgac gcactactca agaactacgg
 601 gctgctctac tgcttcagga aggacatgga caaggtcgag acattcctgc gcatcgtgca
 661 gtgccgctct gtggagggca gctgtggctt ctagctgccc gggtggcatc cctgtgaccc
 721 ctccccagtg cctctcctgg ccctggaagt tgccactcca gtgcccacca gccttgtcct
 781 aataaaatta agttgcatc
//
```

Figure 19

Rat GIP Promoter –1 to –1894 bp.

(-1894)
5'_GAGTGGCGACAGGCTGCTGCTAGCAGGCTCTACACTGAGCTAACCCCACCCATAT
ATATACATAGTTACTATTAGCTTTATTTATATTTTTAAGATTATCATTATATATATAG
TACACTGTAGTGTCTAGATACACAGAAGAGGCATCGGTCTCTTACAGAGAGCCACC
ATGTGGTTGCTGGGGATTGAACTCATACCTCTGGCAGAGCAGTCGGTGCTCTTAACG
CTGAGCCATCTCTCCAGCGCCCCCAAAGCCCAGCTTTTAAAAATATTTTAAAATTTCT
TTCTACAGATTGTTTTATGTATATGAGTGTTTTGTGTGTATGCGTTGATGTGTGTACT
GTGTGCATGGCACATGCCAGTGGGCCACAGACAGAGGGACATGAGATTCCCCTGAA
ACTTGGAGTTACAGATGGCTGTGGGCTGCCATGTGAGTGAGCGCCTTTGGAACCAAA
CCTGGGTCCTGCACAAAAGCAACAAGCACTCTTAATCGTTGAGCCACCTCTCCAACC
CCTTGATATTTCTTTTCGTTGGTGCATTAAAATTGATAAACAGAGGGTTTTCTTTATT
TAAAGATTTATTTATTTTATGTGAGTACACTGTTGCTCTCTTCAGACACATAGAAGAG
GGCATTGCTGGATTCTGCTACAGATGGTTGTGAGCCACCATGTGGTTGCTGGGAGTT
AAACTCAGGACCTCTGGAAGAGCAGTCAGTGCTCTTAACCACTGAGCCATCTCTCCA
GTCCCTTCCTCAACCTTCTGAGAACAGGCAAACTCCACCATGATTGGCTTATAAATC
GTTATATGGACCTACTAAGGATGTAACAACTGGGAGCATGCTTACCTAGCATGTCCG
AAACCCGGAGTTCAGTCCCTAGCACTGCACAATCTCAGTCCTTATGAAGTAGAGGGA
AGATCAGAGGTTCAAGGACAACATCAATTTGAGACCAGCCTGGGCTACTTACCAAA
GAAAGAAAGAGAGAAATAAATAAATAGATAGATAAATAAATAAATAAGTAAATAA
ATATCTTATGGCTGGAGAGTTGGTTCAGTGTTTAAGAGCACTTATTGTGGGGTTGGG
GATTTATCTCAGTGGTAGAGCGTTTGCCTAGGAAGCTCAAGGCCCTGGGTTCGGTCC
CCAGCTCCGGAAACAAAACAAAACAAAACAAAAACAAACAAACAAACAAAAAACC
CTGTCTGGAAAACACCTAAATAAAGATATATATATATAATATATATACATATAATAT
ATATATGATATATATATATATATATATATCTTTGTGGAGGAAGCTATACCTTTCTTTCTT
GAGCCTCCAACACATAAATGTGCCCTGTCATCCCATTCATATTGCCCCAAGTGGGAA
ACCATGTGACTATAAACTCTAAGTTCCTAGTCACTAGGAACTCTCAAGACACCTACC
TCAGGCAGCATCACTTCCGGAGTGCCACCATTATCAGTTAACATCCACATCTGGGAT
TCAGATCCCAGATCCCTTCTGTTCCCTCAGAAGTCACCTACAGCTTTGTGGGGGTGC
CCCTTCCCTCAGAGAGTGCCACCCGAGTTGACCCTCACCAAGGCAACCCTTTGTACC
CACAGAATCCAACAGGAAGTAGGGGGAAGAACAGCCGGCCCTGTGCCAGAAAAAA
AGAGGGGAGGGAGAAGGGGGTGCTCAGCCTACCACCGGGCAGGTCCCAGATAACA
CTGCAGATACCCAAATGTTAATCACCCATTAGCACAGGCCCAGAGCAAAGGGGAAA
GTGATTAGGTGTATAATGGGGTTCACTGGGCAGGAGCAGTGGGCTTGAGCTTCAAA
GATAAGAGGTTTTCAGGTTAATCAGCACCCTGTGGTGTGTGGATATAAGGAAGCTAA
CACAGGGTCTTGAAGCAAGATC_3' (-1)

Figure 20